**CNRS UMR6293 - INSERM U1103 – GReD (Genetics, Reproduction and Development) - UCA (C. Vaury)**

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**Characterization of the seed-specific histone variant H2B.8 comprising an atypical protein structure**

Chromatin structure and in particular the organization and composition of its basic subunit, the nucleosome, plays a central role in determining accessibility of DNA to the cellular machinery during replication, repair and transcription. To fulfill this function, nucleosomes are dynamic entities, in which histone-histone and histone-DNA interactions can be modulated through post-translational modifications of histones as well as incorporation of different histone variants. Indeed, small variations in the primary amino acid sequence of histone proteins can have profound functional impact on nucleosome stability. Plant genomes encode several variants for the core histones H2B, which show specific expression patterns. Very little is known, however, regarding the function of H2B variants.

The genome of the plant model Arabidopsis encodes 11 H2B variants. This project will focus on the H2B.8 variant, which comprises a long and potentially structured N-terminal tail and which is expressed specifically in seeds. We will characterize the function of this variant using molecular biology approaches coupled to next generation sequencing, genetics (including mutants with altered H2B.8 expression) and by screening for novel H2B.8 interacting proteins.

This work will bring novel insight into the yet unexplored role of histone H2B variants in gene expression regulation.

Benoit M *et al*. (2019) Replication-coupled histone H3.1 deposition determines nucleosome composition and heterochromatin dynamics during Arabidopsis seedling development. ***New Phytol***. 221: 385-398

Duc C *et al*. (2017), Arabidopsis ATRX Modulates H3.3 Occupancy and Fine-Tunes Gene Expression. ***Plant Cell****.* 29: 1773-1793.

ATTENTION L'ENSEMBLE DU TEXTE NE DOIT PAS DEPASSER

1990 CARACTERES, ESPACES COMPRIS

Dans l’exemple proposé dans le cadre : n = 1984 caractères